

Serial No. 10/063,987

Docket No. RD28351-1

REMARKS

Applicants appreciate the consideration shown by the Office as evidenced by the Office Action mailed on 15 December 2004. In that Office Action, the Examiner rejected claims 1-41. In this Response, Applicants have amended claims 1, 3, 5, 6, 8, 15, 21, 22, 29, 39, and 41; and have canceled claims 2, 7, and 28. Applicants respectfully request reconsideration of the application by the Examiner in light of the above amendment and the following remarks offered in response to the Office Action.

1. Claim Rejections—35 USC §112

Claims 1-20 and 22-40 were rejected under the first paragraph of section 112. Applicants have amended claim 1 to recite the steps of flowing the cleaning fluid and transmitting vibrational energy, two steps that the Examiner maintained were essential to the practice of the invention. Applicants respectfully submit that the addition of these steps to the claim renders claim 1 and its dependent claims 2-19 compliant with the first paragraph of section 112. Similarly, claim 22 has been amended to recite that the interface is shaped to allow a fluid-tight connection between the reservoir and the article, and further amended to recite a fluid circulator coupled to the source of the cleaning fluid. Applicants respectfully submit that the inclusion of these limitations renders claim 22 and its dependent claims 23-40 compliant with the first paragraph of section 112. favorable reconsideration is respectfully requested.

Claims 1-42 were rejected under the second paragraph of section 112. Applicants have amended the claims to overcome these rejections.

First, independent claims 1, 21, 22, and 41 have been amended to recite that the interface is shaped to allow a fluid-tight connection between the reservoir and the article to be cleaned. This limitation is supported in the originally filed specification, paragraph [0012]. Applicants respectfully submit that it would be apparent to one of ordinary skill in the art precisely what type of shape and structure the interface needs to have in order to allow fluid-tight connection between the reservoir and the article, depending on what the article to be cleaned is. For example, in many cases the interface may simply be shaped to plug into the channel of the article in a way sufficient to allow a fluid-tight connection.

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Therefore, Applicants respectfully submit that the amendment stated above suffices as the recitation of structure required by section 112.

Second, as to claims 1-20, the amendments described above regarding the addition of steps to claim 1 are believed by Applicants to overcome rejection under the second paragraph of section 112. With the addition of the flowing and transmitting steps, Applicants respectfully submit that the recited structural elements now affect the method in the manipulative sense described by the Examiner.

Third, as to claims 6, 21, and 41, Applicants have removed the mathematical shorthand " $n=1, 3, 5, 7, 9, \dots$ " and replaced it with the meaning associated with such shorthand, a meaning which is commonly in use and well known to those in the art: " n is a number having a value selected from the group consisting of the odd integers." Applicants respectfully submit that this amendment renders these claims compliant with the second paragraph of section 112.

Fourth, as to claims 22-40, the Examiner maintains that it is not clear how energy can comprise a frequency and a wavelength. Applicants respectfully submit that it is well known to those in the art that vibrational energy, such as sonic and ultrasonic energy (see paragraph [0016] of the specification) is characterized by a frequency and a wavelength—the two are essentially interchangeable because one is the reciprocal of the other. In fact, one difference between sonic energy and ultrasonic energy is that ultrasonic energy has a frequency that is higher (that is, a wavelength that is lower) than the detection limit of the human ear. It is well known in the art that such energy is characterized by wavelength/frequency parameters and that such parameters play a role in the use of ultrasonic technology for cleaning. See for example, <http://www.variclean.nl/theory.html>. Applicants respectfully submit that claims 22-40 are compliant with the second paragraph of section 112 and request reconsideration.

2. Allowable Subject Matter

Applicants note with appreciation the Examiner's remarks to the effect that claims 21 and 41 recite allowable material provided the section 112 rejections were overcome. Applicants respectfully submit that these rejections have been overcome in view of the remarks and amendments set forth above.

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3. Conclusion

In light of the remarks presented herein, Applicants believe that this serves as a complete response to the subject Office Action and that the present application is in condition for allowance. If, however, any issues remain unresolved, the Examiner is invited to telephone the undersigned at the number provided below.

Respectfully submitted,



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